Cyclopropanation of α,β-Unsaturated Aldehydes with a Supported Peptide

**Significance:** The amphiphilic resin-supported peptide 1 catalyzed the diastereo- and enantioselective cyclopropanation of aromatic α,β-unsaturated aldehydes 2 with dimethylphenacylsulfonium bromide in the presence of NaHCO₃ to give the corresponding cyclopropanes 3 in 83–88% yield with 98–99% ee and 92–97% diastereoselectivity (9 examples, eq. 1). In the formation of 3g, the catalyst was recovered by filtration and reused five times without significant loss of its catalytic performance (1ˢᵗ reuse: 87% yield, 99% ee, 94% diastereoselectivity; 5ᵗʰ reuse: 83% yield, 99% ee, 95% diastereoselectivity).


**SYNFACTS Contributors:** Yasuhiro Uozumi, Fumie Sakurai

**SYNFACTS 2014, 10(1), 0099 Published online: 13.12.2013 DOI: 10.1055/s-0033-1340383; Reg-No.: Y13613SF